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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,735	03/13/2007	Michael Powers	VEC-138-B (RUS0143)	5019

29296 7590 12/21/2011

JULIA CHURCH DIERKER
DIERKER & ASSOCIATES, P.C.
3331 W. BIG BEAVER RD. SUITE 109
TROY, MI 48084-2813

EXAMINER	
ROSATI, BRANDON MICHAEL	

ART UNIT	PAPER NUMBER
3744	

MAIL DATE	DELIVERY MODE
12/21/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/582,735
Filing Date: March 13, 2007
Appellant(s): POWERS ET AL.

POWERS ET AL.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 8/16/2011 appealing from the Office action mailed 1/19/2011.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 10-12. 14, and 17-19 are currently pending under Final Rejection and claims 1-9, 13, 15, and 16 have been cancelled.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the

appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

6,749,015 B2	Moreau	6-2004
2003/0217838 A1	Dey et al.	11-2003
4,023,618	Kun et al.	5-1977

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Appellant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Claims 10-12, 14, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moreau (U.S. Patent No. 6,749,015 B2) in view of Dey et al. (U.S. Pub. No. 2003/0217838) in further view of Kun et al. (U.S. Patent No. 4,023,618).

Regarding claims 10, 14, 18, and 19, Moreau disclose in Figures 1 and 3 all the claimed limitations including a headering arrangement comprising a heat exchanger body part (i.e. middle of device), a tank (i.e. fluid chamber) (28), a plurality of tubes (10), a header pan (i.e. manifold) (16) disposed at the end of the tubes, which includes a plurality of slots, is flat, and defines a plurality of collars (20), each of the collars forming a ferrule which surrounds and is in contact with a respective tube, a tank foot (i.e. contour) (30), the plurality of tubes passes through the slots and maintain the tank foot in place (along with the header and manifold plate), the collars being inverted in relation to a line of extension of the tubes, the line of extension defined by a vector that extends away from the respective plurality of tubes of an end segment of the respective one of the plurality of tubes (Column 4, lines 1-63). Moreau does not disclose an

essentially flat gasket, a plastic tank or the tank foot directly maintaining the tank foot in place. However, Dey et al. disclose in Figures 4, 6b and 6c, a heat exchanger which has a core comprised of heat exchanger tubes, a header and a gasket (46) and a tank (25) made of plastic (Paragraphs [0049] and [0056]). Hence, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the teachings of Moreau with the essentially flat gasket of Dey et al. because adding the gasket would help to ensure a tight fluidly sealed system which would reduce the risk of leakage and thus increase the efficiency of the device and thus increase the overall amount of potential heat transfer. Further, Kun et al. disclose in Figures 8-10, the concept of having the tank foot (i.e. inner tank member) (67) be directly maintained by the tube (i.e. combination of (60/61)) (Column 12, lines 50-68). Hence, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the combined teachings of Moreau and Dey et al. with the directly maintained tank foot of Kun et al. because this configuration would ease assembly and provide a more cost effective and simpler heat exchanger unit (Column 6, lines 44-47). It is noted that the Examiner is deeming the entire combined structure of (60 and 61) as the tube, and thus the tank foot is directly maintained by the tube. It is noted that the phrases "for a heat exchanger" and "for use in automotive application" are statements of intended use and the device is capable of performing the functions.

Regarding claim 11, the combined teachings of Moreau, Dey et al., and Kun et al. disclose a tube having a length that appears to be of less than or about twice the thickness of the header plus tank foot width of the header, but fails to disclose the exact dimensions of the tube or header. Although the exact dimensions are not given, it is obvious from Figure 1 of Moreau and

Figure 2 of Dey et al. that tube has a length of less than or about twice the thickness of the header plus tank foot width of the header. Furthermore, it is an obvious mechanical expedient to one of ordinary skill in the art to utilize a tube having a length of less than or about twice the thickness of the header plus tank foot width of the header because doing so will ensure a properly functioning tube as well as minimizes the amount of material needed to be used to maximize cost.

Regarding claims 12 and 17, the combined teachings of Moreau, Dey et al., and Kun et al. disclose the header pan comprising at least one flat medallion. It is noted that since the header pan of Moreau is flat, it therefore has a flat medallion. Furthermore, because the Examiner is examining the final product (i.e. the header pan), the steps utilized to make the final product, such as pressing, which is referred to as a medallion are given limited patentable weight in a an apparatus claim.

(10) Response to Argument

In response to appellant's arguments (pages 10 and 11) that the reference does not teach the tubes abutting the tank foot, the Examiner disagrees. First, the combined teachings disclose all of the structural features f the claim including the tank foot abutting the tube and directly maintaining the tank foot in place. This feature was taught by Kun et al., specifically shown in Figures 8,10, and 11. In Kun et al., while the reference does give an additional reference numeral (61), element (61) is a continuous piece of material which is the same as reference numeral (60), the tubes. Thus, given its broadest reasonable interpretation, because the material is the same and one continuous piece, the combination of (60 and 63) is deemed to be a tube. Thus, the tank foot

(70) does abut the tube and directly maintains the tank foot in place. Therefore, the appellant's arguments should be deemed unpersuasive and the rejection should be maintained.

In response to appellant's arguments (pages 11 and 12) that Kun et al. do not teach the tank foot abutting the tube. the Examiner disagrees. Kun et al. show in Figures 8, 10, and 11, the concept of a tank foot (70) abutting the tubes. As stated above, Kun et al., do teach the tank foot abutting the tube, not simply the "fin" as appellant argues. Further, the Kun et al. reference was utilized to teach the concept of a tank foot directly abutting a tube. Element (70) of Kun et al. is structurally the same as appellant's tank foot. Elements 67 and 71 are both part of the tank, and thus the tank foot (70) is deemed to be a tank foot at the end of a tank. Further, both Moreau and Dey et al. disclose tank feet. Thus, the combined teachings disclose all of the structural features of the claim. Therefore, the appellant's arguments should be deemed unpersuasive and the rejection should be maintained.

In response to appellant's arguments against the references individually (page 12), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The combined teachings disclose all of the structural features of the claims including the tubes extending through slots in the header (see Moreau Figures 1 and 3 or Dey et al. Figures 6b and 6c). Therefore, the appellant's arguments are unpersuasive and the rejection is maintained.

In response to appellant's argument (pages 12 and 13) that there is no teaching, suggestion, or motivation to combine the references, the examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the

claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007). In this case, all the references are in the same field on endeavor (i.e. heat exchangers) and it is well known to one having ordinary skill in the art that adding a gasket does help to ensure a fluidly tight seal. Further, the fact that it would take more time to build because of extra work required to add the gasket, bares no consequence on the obviousness to utilize a gasket. Further, appellant argues the references individually. Appellant is reminded that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Further, the combined teachings disclose all of the structural features of the claims. Therefore, the appellant's arguments are unpersuasive and the rejection is maintained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Brandon M. Rosati

/BRANDON M ROSATI/
Examiner, Art Unit 3744

Conferees:

/CHERYL J. TYLER/
Supervisory Patent Examiner, Art Unit 3744

/Kenneth B Rinehart/
Supervisory Patent Examiner, Art Unit 3743